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In the Claims

Claims are amended as follows:

1. (currently amended) A multiple input multiple-output (MIMO) radio communications device comprising
 - (i) a plurality of antenna elements; and
 - (ii) a combiner arranged to adaptively combine said antenna elements such that two or more diverse directional antenna beams are provided to receive two or more inputs, where each input is a MIMO channel; said combiner being arranged to couple said inputs to two or more receive chains; and
 - (iii) a processor arranged to operate on outputs of multiple receive chains to produce an output signal, andwherein there are more antenna elements than receive chains.
2. (canceled)
3. (previously amended) A radio communications device as claimed in claim 1 in the form of a user terminal.
4. (original) A radio communications device as claimed in claim 1 wherein said antenna beams are diverse as a result of any of polarisation diversity, angle diversity and space diversity.
5. (original) A radio communications device as claimed in claim 1 wherein said combiner comprises at least one beamformer.
6. (original) A radio communications device as claimed in claim 1 wherein at least some of said antenna elements are provided as a phased array.

7. (original) A radio communications device as claimed in claim 1 wherein a pair of antenna beams are provided with substantially orthogonal polarisations and at substantially similar directions.

8. (previously amended) A radio communications device as claimed in claim 7 wherein a second pair of antenna beams is provided also with substantially orthogonal polarisations to one another and at substantially similar directions but being at a different direction from said pair of antenna beams.

9. (original) A radio communications device as claimed in claim 1 wherein said combiner is arranged to electronically steer the directional antenna beams.

10. (original) A communications network comprising a plurality of radio communications devices as claimed in claim 1.

11. (currently amended) A method of operating a multiple input multiple-output (MIMO) radio communications device comprising the steps of:

(i) receiving radio signals at a plurality of antenna elements by;
(ii) using a combiner to adaptively combine the antenna elements such that they are operable in at least one direction to receive two or more diverse inputs, where each input is a MIMO channel, and coupling said inputs to two or more receive chains; and
processing outputs of multiple receive chains to produce an output signal, and
wherein there are more antenna elements than receive chains.

12. (currently amended) A method as claimed in claim 11 wherein said radio communications device is a multiple input multiple output communications device and wherein said received signals are space-time coded and said diverse channels are multiple input multiple output channels.

13. (currently amended) A method of operating a multiple input multiple output (MIMO) radio communications device comprising the steps of:

- (i) transmitting radio signals from a plurality of antenna elements by;
 - (ii) processing signals on two or more transmit chains to produce two or more processed signals, where each processed signal is a MIMO channel; and
 - (iii) using a combiner to adaptively combine the antenna elements such that they are operable in at least one direction to transmit the two or more processed signals as diverse outputs; and
- wherein there are more antenna elements than transmit chains.

14. (currently amended) A method of operating a radio communications device as claimed in claim 13 which is a multiple input multiple output communications device and wherein said radio signals are space-time coded and said diverse channels are multiple input multiple output channels.